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A STUDY OF THE INTERRELATIONSHIPS  
BETWEEN LEADERSHIP CLIMATE, MORALE AND  
PERFORMANCE IN SMALL COAST GUARD GROUPS

RALPH W. EUSTIS

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A STUDY OF THE INTERRELATIONSHIPS  
BETWEEN LEADERSHIP CLIMATE, MORALE AND PERFORMANCE  
IN SMALL COAST GUARD GROUPS

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by  
Ralph W. Eustis  
Lieutenant, United States Coast Guard

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Submitted in partial fulfillment of  
the requirements for the degree of

MASTER OF SCIENCE

IN

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U.S. NAVAL POSTGRADUATE SCHOOL  
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A STUDY OF THE FORMATION OF  
LEADERSHIP CLIMATE, MORALE AND PERFORMANCE  
IN SMALL COAST GUARD GROUPS

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## ABSTRACT

Recent changes in social environment have caused men to seek higher level personal goals of status, self-satisfaction and morale independence. Leadership techniques, directing groups towards the accomplishment of the Navy's mission, must be revised accordingly. This study attempts to show, through a comparison of the effectiveness of democratic, autocratic and laissez-faire leadership climates in various working groups, the effects of human relations, group dynamics and group decision making upon naval leadership. Findings show that dynamic leadership which creates a democratic working environment, through the application of group decision techniques, provides the most effective motivation towards accomplishing the Navy's mission while satisfying individual needs.



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## 1. Introduction.

Naval leadership is experiencing the impact of a social revolution which has evolved from the prosperity of the Industrial Revolution. The productivity of modern industry has filled the basic needs of subsistence for the average man and has freed him to seek the fulfillment of higher goals such as moral independence, personal status, and self-fulfillment as established in Maslow's theory of the "hierarchy of needs" (12). As this social revolution has caused men to modify their personal goals and expectations, it has had far-reaching effects upon modern society. Today men respond to dynamic leadership rather than archaic systems of command and coercion. As they have become members of an integrated group functioning to satisfy their individual goals, as well as the objectives of the group, they have come to expect a greater opportunity to express themselves through individual initiative and participation in decision making. The study of human relations and group dynamics has shown that modern men will work together effectively only when, through the interactions of groups and their leaders, they can identify and accomplish their own goals within the framework of the group objectives.

Purpose of the study. How do the trends towards scientific, democratic leadership affect the naval services? Can they forsake their traditions of authoritarian command, "to do or die but not to reason why", for the leadership theories of the social scientist? That present naval leadership is not fully adequate is evidenced by poor performance, low personnel retention rates, and the low prestige of a career in the naval service.

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That present level leadership is not effective.

poor performance, low personnel, and so on.

of a career in the same way.

The present study was conducted to investigate one course which offers an opportunity to improve the effectiveness of naval leadership. What leadership climates are the most effective in achieving the missions of the Navy and the Coast Guard? By General Order Number 21, naval leadership had been defined as "the accomplishing of the Navy's mission through people". Leadership may be further defined as the process by which officers and petty officers "influence the activities of organized groups in efforts towards setting and achieving goals" which will accomplish the Navy's or Coast Guard's mission (20).

A democratic leader is one who, functioning within an organizational framework, guides and coordinates a group decision making process to identify and establish individual goals and integrate them with the goals of the organization in order that both may be accomplished simultaneously. Group decision making has been defined by Maier as "cooperative problem solving and group discipline through leadership and social pressures rather than force" (25). Figure 1 gives a complete discussion of group decision making. Other leadership climates that will be considered in this study are autocratic and laissez-faire. An autocratic leader is one who directs the group's activities by issuing frequent and detailed instruction with little concern for the opinions or goals of the group members. The laissez-faire leader is characterized by his limited participation in and direction provided to group activities. Characteristics of these leadership climates are compared in Figure 2.

Much of the research conducted on leadership has stressed the characteristics of the group and the situations within which it functions. For the purposes of this study, as well as many prior studies, leadership is viewed as the participation of a group member in



FIGURE 1.

GROUP DECISION METHODS DEFINED (25)

Group Decision Is Not

1. Abandoning control of the situation.
2. A disregard of discipline.
3. A way of giving each individual what he wants.
4. A way of manipulating people.
5. A way of selling the supervisor's ideas to a group.
6. Sugar-coated autocracy.
7. A matter of collecting votes.
8. Consultative supervision in which mere advice is sought.
9. A way of turning the company over to employees.
10. Something anyone can do if he wishes.

Group Decision Is

- A way of controlling through leadership rather than force.
- A way of group discipline through social pressure.
- A way of being fair to the job and all members of a group.
- A way of reconciling conflicting attitudes.
- Permitting the group to jell on the idea it thinks will best solve a problem.
- A way of letting facts and feelings operate.
- Pooled thinking
- Cooperative problem solving.
- A way of giving each person a chance to participate in things that concern him in his work situation.
- A method that requires skill and a respect for other people.



FIGURE 2.

# LEADERSHIP CLASSIFICATIONS

Developed from classifications established by White and Lippitt in a study of Leader Behavior and Member Reaction in Three Social Climates. (10)

## AUTOCRATIC

## DEMOCRATIC

## LAISSEZ-FAIRE

- |  |   |   |
|--|---|---|
| 1. Determination of policy by leader   | Policies a matter of group discussion and decision, encouraged and assisted by leader   | Complete freedom for group or individual decision, little or no observable leadership demonstrated  |
| 2. Techniques and activity dictated by leader, so that future steps were always uncertain  | Activity perspective gained during group discussion. General steps to group goal outlined and when advise needed, leader suggested alternative procedures from which decision could be made | Leader took limited part in group activities. Expected unit mission as defined by directive to be accomplished by individuals or group  |
| 3. Leader tended to be "personal" in his praise and criticism of the work of each member; remained aloof from active group participation except when demonstrating | Add expressed praise and satisfaction frequently  | Infrequent spontaneous comments on member activities unless questioned, and little attempt to appraise or regulate course of events, until results did not satisfy superiors. |
| 4. Leader usually dictated the work tasks of each member   | Members were free to plan work programs, methods and division of work between and within departments with leaders assistance available and leader interest displayed at all times           | Leader did not participate or show outward interest in group activities other than to have the group satisfy his seniors.   |
| 5. Delegated a minimum of real authority; established clear policy that he maintained authority  | Clearly delegated a maximum of authority and extracted corresponding responsibility consistent with abilities of subordinates   | Delegated authority in a hazy manner. Did not give comparable responsibility. Did not establish interrelationships between group members                                      |





activities which will guide the group towards establishing and achieving goals. The effectiveness of these activities may be indicated by the morale and performance or productivity of the individual groups.

Morale, as defined by Ross Stagher, is an "index of the extent to which the individual perceives a probability of satisfying his own motives through cooperation with the group" (16). High morale is evidenced by many factors including cooperation within the group, a high number of interactions between group members, and mutual confidence in the group, as well as personal satisfaction of the group members.

A survey of prior research in the area. The earliest studies in the area of motivation and productivity, which were production oriented, revealed conflicting results and indicated that there was a deeper influence upon production and morale than that provided by materialistic motivational methods such as physical working conditions and pay scales. This led to studies which extended into the areas of human relations and group dynamics and their effects upon productivity. These studies received only limited acceptance until about 1930 when a series of studies at the Hawthorne plant of Western Electric Company was conducted. These studies conducted by Mayo and his associates at the Harvard Business School called attention to the social motives and clearly showed that group dynamics was a fundamental factor in industrial motivation (26). These became a springboard for future corroborating studies or a foil upon which contradicting theories were to be built.

Studies in group dynamics may be grouped into four general approaches towards establishing the influence of work group environment upon motivation and performance. This field theory approach of Lewin



must be considered a factor in all approaches. The other approaches include the empirical determination of major group dimensions through factor analysis as in the study groups of Cantnell; the approach of Stogdill and Shartle in the Ohio State Leadership Studies in developing a theoretical concept of formal group organization; the observation of the interactions of group members in informal work groups in laboratory type conditions as in the studies of Lewin and his students at the University of Iowa or field studies of actual industrial groups as in the studies of Likert at the Institute for Social Research at the University of Michigan (4, 7, 15). The present study falls into the latter group as a field study of actual conditions in small Coast Guard operating units.

Though the findings of the individual studies have often appeared to contradict one another, when they have been brought together and considered within the scope of the entire area of group dynamics it is found that each of these studies has contributed to the development of significant trends interrelating the many factors, including leadership climate, which contribute towards individual motivation, self-satisfaction and productivity. The ultimate goal of all of these studies has been directed toward the "discovery of general laws about the various determinants on various properties" of working groups which, when applied by management can effectively direct human energy towards organizational goals in such a way that the basic needs of the individuals can be satisfied (20).

The "Hawthorne Studies" are among the most significant studies in the field of group dynamics. These studies, conducted by Mayo and his colleagues, grew out of a series of experiments designed to determine the relationships between illumination and productivity at the Western



Electric plant in Hawthorne, Illinois. Early results were contradictory and indicated that regardless of how conditions were changed, performances of both test and control groups were increased. These early results led to an extended series of studies conducted between 1924 and 1940. Conclusions showed that group membership and recognition were dominant factors in motivation of factory workers. These studies suggested that both satisfaction of individual goals and morale as well as high production could be accomplished through the same employee-centered management techniques aimed at giving a sense of belonging and participation to the workers (26).

These studies of Mayo aroused interest and led to the establishment of group dynamics research centers throughout the nation. One of the foremost of these was the Child Research Center of the University of Iowa. Here, in carefully controlled experiments with groups of children, Lewin and his students observed reactions and interactions within informal groups (7, 9, 18). Of these the experiment of White and Lippett which observed the reactions of groups of children in carefully established democratic, autocratic or laissez-faire leadership climates has become a classic (18). They concluded that the democratic climate provided the most effective motivational environment in which to achieve a high level of both personal satisfaction and group performance. This series of studies also noted a large amount of "critical discontent and aggressive behavior" in the autocratic environment.

In another program, supported by the Office of Naval Research and the Rockefeller Foundation, a series of field studies were conducted by the Survey Research Center of the University of Michigan which dealt with social reality and the practical application of the theories of



leadership practice in relation to morale and productivity (4). These studies focused upon the attitude and behavior of supervisors and their influence upon productivity. The best known of these field studies, conducted with groups of insurance company office employees and railroad section gangs, have shown that groups with dynamic leaders who create a democratic or autocratic climate obtained a higher level of productivity than did laissez-faire leaders. The highest levels of morale and productivity were obtained in those groups where the leaders participated actively in group functions. In these studies, productivity was found to correlate with the closeness of supervision. In low producing groups the supervisor had generally created an autocratic climate by limiting the freedom of subordinates to make decisions and accomplish work in their own manner. They gave frequent detailed instructions and checked more frequently on their subordinates than did democratic leaders. The supervisors of the highest producing groups delegated a maximum amount of authority and encouraged participation and self-determination to create a democratic climate. In relating productivity to morale, these studies showed that groups with the most individual pride in the group and where members felt they "were really a part of the group" attained the highest productivity. The most effective leaders were concerned with the satisfaction of employee needs rather than production. The production was maintained indirectly through the increased motivation of the subordinates of these employee-centered supervisors.

In a later study by Preston and Heintz, the "effects of participatory versus supervisory leadership" were studied among groups of college psychology students (14). In these studies the participatory





leaders were trained to create a democratic climate by encouraging participation and free participation by all group members in decision making activities. Supervisory leaders created a democratic climate by not participating in the group except to see that the assigned task was completed. Observations showed that group decision making within the democratic climate was most effective in developing accepted group standards and goals. In correlating acceptance of group standards with high morale, they found that the higher level of morale was achieved in democratic groups.

None of these prior studies can be considered to be directly applicable to military groups inasmuch as they concern children, college students, or specific industrial groups. Individuals in the naval service may respond differently due to difference in age, background, isolation, group organization or mission.

Each of these studies has shown that the active participation and sense of belonging to the group, which is best developed in a democratic climate, provides the most effective method of accomplishing objectives through the utilization of human resources. Are these findings applicable to the naval services?

The present study. The present study extends prior studies in the area as it makes the transition from laboratory experiments and controlled observations of industrial groups to the observation of small operational military groups. The correlation between leadership climate, morale and productivity on Coast Guard working groups has been analyzed in view of the findings of prior studies to determine what leadership climate provides the most effective motivation towards self-satisfaction and the accomplishment of the Coast Guard's mission.



The first phase of the study considered the leadership climate prevailing at nine United States Coast Guard Loran Transmitting Stations. The second phase considered various smaller working groups in which a Petty Officer in Charge or a petty officer department head functioned as the leader of a group of three to eight men.

The analysis of the groups studied was limited by the number of groups observed and by the small size of all groups. In spite of these limitations, significant trends were apparent. Due to difficulties in quantifying measures of morale and performance, these characteristics have been compared on relative rather than absolute scales.

In both phases of the study the effectiveness of the motivation established in democratic, autocratic and laissez-faire leadership climates has been evaluated. Inasmuch as any leader actually used a combination of these traits which could be located at some point within Maier's leadership triangle, as shown in Figure 3, each leader was classified according to the dominant characteristic he evidenced.

This study attempted to determine the interrelationships between these leadership climates, morale, performance and enlisted retention rates. Its ultimate goal was to demonstrate that the studies of the social scientists can be adapted to small military groups to provide a base course towards improved morale and performance through increased motivation developed in democratic leadership climates.

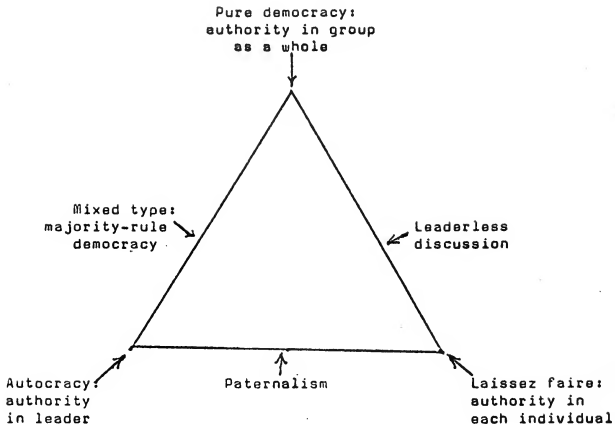
## 2. Leadership Climate at Loran Transmitting Stations.

The first phase of the study was developed to examine the interrelationships between the leadership climates established by the Commanding Officers of nine Coast Guard Loran Transmitting Stations and



FIGURE 3.

MAIER'S LEADERSHIP TRIANGLE (25)



The location of authority or the place where decisions are made differs in pure democracy, autocracy and laissez-faire situations. These extreme locations are shown as the angles of a triangle. Intermediate locations are also possible, and these can be described as falling on the sides of the triangle. A paternalistic kind of leader is both autocratic, in that he makes decisions, and laissez-faire, in that he considers the wishes of individuals, and so may be described as being a point on the base of the triangle. Since a leaderless discussion involves discussion but does not make for organized action, it may be described as a condition between pure democracy and laissez-faire.

A leader who showed all characteristics would fall within the triangle. The leader's act describes his style of leadership for a given situation.



the performance and morale of the units. Each station consisted of one officer, one chief petty officer, approximately ten rated petty officers and eight to ten non-rated men. These units, located at isolated sites in Japan, Korea and the Ryukyu Islands, were observed under several different Commanding Officers over a period of approximately four years.

Procedures. The data utilized for this phase of the study was collected from operating logs, inspection reports, and informal notes while serving as Deputy Commander, Far East Section, United States Coast Guard. In this position responsibilities included the inspection and supervision of nine Loran Transmitting Stations. Though much of the data was based upon personal observation and is thus subject to bias, it shows relative as well as absolute conditions and is considered to be of significant value for the purposes of this study.

In this portion of the study, productivity was determined as a function of operational performance as reported in operating logs and as a function of general maintenance. The age of the units and general environmental conditions were considered in order to provide comparability between units.

Morale was determined by the general atmosphere about the unit, the degree of interaction between the men both on the job and off, and the pride of the individuals in their unit.

Leadership climates were based upon the degree of responsibility delegated to subordinates and the response of subordinates to this responsibility as well as the closeness of supervision and degree of participation in group activities by the Commanding Officer.

Leadership Climate and Performance. In 25 percent of the laissez-faire groups, operational performance was judged to be unsatisfactory.





This is compared to 20 percent of the autocratic groups and only seven percent of the democratic groups. It is highly significant that although the autocratic and democratic groups observed were equal in number, 35 percent of the units with democratic leaders produced excellent operational performance, whereas only 18 percent of the autocratic groups performed at this level. A review of Table I shows similar trends in general maintenance conditions. Noteworthy is that no units showed any improvement in conditions in a laissez-faire climate. Apparently in this climate the group could not identify its goals or gain positive motivation. Also worthy of note is that no unit deteriorated in a democratic climate and that 87 percent of the units demonstrated marked improvements under this type of leadership.

The democratic leadership climate, through participation and understanding of organizational goals, provided the most effective motivation towards high levels of performance.

Leadership Climate and Morale. The advantages of the democratic climate were obvious in their relationship to group morale. Thirty-eight percent of the groups under study evidenced excellent morale; of these 32 percent were units with democratic leaders, the remainder from autocratic groups. One hundred percent of the groups functioning in a laissez-faire climate were characterized by poor morale and low self-satisfaction, whereas only seven percent of the democratic groups and 27 percent of the autocratic groups were in that classification. The relationships of the type of leadership climate prevailing and morale of the unit is tabulated in Table II.

The democratic leaders were able to achieve a high degree of understanding within the group that led to positive motivation as evidenced



TABLE I

## RELATIONSHIP OF PRODUCTIVITY TO LEADERSHIP CLIMATE

Based on observation of 34 Coast Guard LtJG's and Lt's serving as Commanding Officers of 9 Loran transmitting stations.

Leadership Climate	No. exhibiting primary traits	Operational performance	General Maintenance		
			Condition		Change
		Excel- Sat. Unsatisf.	Excel- Sat. Unsatisf.	Imp. Worse	No change
Autocratic number % of total groups % of Classification	15	6 6 3	1 11 3	8	1 6
	44	18 18 9	3 32 9	24	3 6
	--	40 40 20	7 73 20	53	7 40
Democratic number % of total groups % of Classification	15	12 2 1	9 5 1	13	0 2
	44	35 6 3	26 21 3	38	0 6
	--	80 13 7	60 33 7	87	0 13
Laissez-faire number % of total groups % of Classification	4	1 2 1	0 4 0	0	2 2
	12	3 6 3	- 12 -	-	6 6
	--	25 50 25	- 100 -	-	50 50



TABLE II

## RELATIONSHIP OF MORALE TO LEADERSHIP CLIMATE

Based on observation of 34 Coast Guard LtJG's and Lt's serving as Commanding Officers of 9 Loran transmitting stations.

Leadership Classifications	Morale			Change in morale from prior leader		No. of Court Martials
	Poor	Good	Excellent	Improv- ed	No Change Deterior- ated	
Autocratic number 15 % of total groups 44 % of Class- ification	4	9	2	6	5 4	23 68*
Democratic number 15 % of total groups 44 % of class- ification	1	3	11	9	6 0	7
Laissez-faire number 4 % of total groups 12 % of Class- ification	4	0	0	0	2 2	4
	12	0	0	0	6 6	12
	100	-	-	-	50 50	50

\* Percent of total number of court martials



by generally greater productivity and high morale.

Morale and Productivity. When the relationships between morale and productivity were examined, the trend appeared for high morale to be associated with high productivity as summarized in Table III. Apparently the democratic leader, by integrating himself, his thoughts and his group, was able to achieve a high degree of understanding that led to high morale and productivity. On the other hand, the autocratic leader who expected his crew "to do or die but not to reason why" did not achieve as effective results. His successes were the result of coercion and motivation by force and threat of punishment rather than by leadership as evidenced by the higher number of courts martials which in many cases resulted from the member's attempt to "reason why" or to reach individual goals which were in conflict with group goals. Conversely, the democratic groups had the smallest proportion of courts martials; evidently each member, as he was allowed to participate in group planning and decision making, came to identify his goals with those of the group.

It must be noted that a significant portion of the groups evidencing poor morale did obtain excellent performance; likewise a significant portion of the units with good or excellent morale were rated as unsatisfactory in performance. These results indicate that though morale and productivity are definitely related, additional undetermined factors must be considered before the exact relationship can be defined. In spite of this fact it was definitely established that morale and performance can be improved by similar dynamic democratic leadership climates.

Summary. This phase of the study has shown that a democratic climate created through group decision making techniques at small Loran Transmitting Stations is a factor in developing motivation contributing





TABLE III  
RELATIONSHIP OF MORALE TO PRODUCTIVITY

Based on observation of 34 Coast Guard LtJG's and LT's serving as Commanding Officers of 9 Loran Transmitting Stations

Level of Morale	Operational Performance		General Housekeeping	
	Excellent	Good	Poor	Unsat.
Excellent 13	6	7	0	8
Good 12	2	8	2	0
Poor 9	3	4	2	1
				3
				10
				8
				1
				2

General housekeeping appears to be a better indication of performance at times than is operational performance because it can respond more rapidly to changes in leadership.



to high morale and performance. Though high morale and performance could not be shown to be strongly related to each other, their interrelationships with leadership climate indicates that both may be achieved through the application of dynamic leadership, and similar group decision methods. This phase of the study corroborates the findings of prior studies and indicates that the motivation theories of the social scientists are applicable to small military groups.

### 3. Leadership Climate in Small Coast Guard Working Groups.

The second phase of this study was conducted to attempt to quantify the measures of morale and performance in order that a more complete mathematical analysis could be made. It was also desired to continue the study in a manner that would remove as much of the personal bias of the author as possible. In this phase of the study, the leadership climates prevailing in small Coast Guard groups in which a petty officer was designated as Officer in Charge or department head were analyzed. The petty officers functioning as group leaders consisted of boatswainmates, enginemen, electronics technicians and hospital corpsmen with three to 27 years of service. These groups were selected for their comparability of size and function. The ability to personally visit several of the units observed assisted in the development of valid questionnaires.

Procedures. For this phase of the study, a series of three questionnaires for each group was developed. These may be found in the Appendix. One completed by the Petty Officer in Charge of the group under study was designed to gain his evaluation of group morale and performance and his leadership attitudes. A similar questionnaire completed by his immediate superior was designed to obtain another measure of



morale and performance as well as to establish the prevailing leadership climate. The third was a morale survey completed by each member of the group.

These questionnaires were distributed to 11 Coast Guard Group Offices which included a total of 54 small working groups with a Petty Officer in Charge who was considered the group leader.<sup>1</sup> Additional questionnaires were distributed to 24 Loran Transmitting Stations to be completed on each of three departments within the unit. Of this total of 126 groups of questionnaires, 97 were returned. Of these, only 49 groups or 51 percent were completed properly and suitable for use in all areas of the study. 287 of the morale surveys returned were suitable for studying the correlations between various attitudes of individuals.

From the questionnaires, the mean score for the morale and performance of each group was computed. Groups were then ranked by both morale and performance scores for further analysis. Because of the high correlation of .78 between the superiors' and the petty officers' evaluation of performance, they were considered jointly in determining the performance score. The leadership climate established was determined from the predominant characteristics exhibited by the petty officer and verified by a comparison with response to selected items on the questionnaires.

Leadership and Morale. In Table IV, the rankings of leadership climate versus both morale and performance has been tabulated. Results show that 78 percent of the groups which functioned in a predominantly laissez-faire climate were located in the lowest one-third of the total

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<sup>1</sup> A Coast Guard Group Office is a command having responsibility over a number of lighthouses, repair facilities, small vessels or similar units with a Petty Officer in Charge.



TABLE IV

RELATIONSHIP OF LEADERSHIP ULLIMATE TO PERFORMANCE AND MORALE  
Based upon the observation of 49 groups in which the group leader  
was a Coast Guard Petty Officer.

Leadership Ullimate	No. exhibiting primary traits	Performance			Morale		
		upper third	middle third	lower third	upper third	middle third	lower third
Autocratic number % of total groups % of Class- ification	29 60% --	16 33% 55%	9 16% 31%	4 8% 14%	15 31% 52%	10 20% 34%	4 8% 14%
Democratic number % of total groups % of Class- ification	11 22% --	1 2% 9%	5 10% 45%	5 10% 45%	0 - -	4 8% 36%	7 14% 64%
<u>Laissez-faire</u> number % of total groups % of Class ification	9 18% --	1 2% 11%	4 8% 45%	4 8% 44%	1 2% 11%	1 2% 11%	7 14% 78%





groups in relation to morale. In the autocratic groups a slightly smaller percentage, 63 percent, were located in this lowest one-third with respect to morale. By comparison, only 14 percent of the democratic groups fell into this area, with 52 percent of them in the top one-third in the morale ranking. None of the autocratic groups were in the top one-third of the morale ranking and only 11 percent of the laissez-faire groups.

Leadership and Performance. When the relationship between the prevailing leadership climate and the performance of the group was analyzed it was found that the democratic groups attained higher scores than other groups. 55 percent of the democratic groups were in the top one-third of the performance rankings in respect to performance whereas only nine percent of the autocratic groups and 11 percent of the laissez-faire groups were able to achieve this level. When the groups whose performance was considered to be in the lowest one-third of the performance rankings were studied, only 14 percent of the democratic groups were found here as contrasted to 44 percent of the autocratic groups and 45 percent of the laissez-faire groups.

From the above, it appears that leadership which promotes a democratic climate provides greater motivation towards high levels of morale and performance than that which promotes an autocratic or laissez-faire climate. Trends indicated that the laissez-faire climate provides the least motivation towards desired standards of morale and performance. These findings were similar to those of Preston and Heintz which showed that higher morale and acceptance of group standards were obtained from groups with either democratic or autocratic leaders who participated in group activities than with laissez-faire leaders (14).



Leadership and Discipline. A review of the disciplinary cases reported in Table V showed a definite advantage to the democratic groups. In these groups only .51 non-judicial punishment actions were experienced per group whereas the autocratic and laissez-faire groups experienced .73 and .78 cases per group. The difference between autocratic and laissez-faire groups was not significant. Likewise the relationships between Courts Martials reported and leadership climate is insignificant due to the small total number reported.

TABLE V  
RELATIONSHIPS BETWEEN LEADERSHIP CLIMATE AND DISCIPLINARY CASES

Based upon the observation of 40 groups of Coast Guard enlisted personnel.				
Leadership Climate	Courts Martials		Non-judicial Punishment	
	Number	Average/Group	Number	Average/Group
Democratic	1	.34	15	.51
Autocratic	1	.91	8	.73
<u>Laissez-Faire</u>	0	0	7	.78

Leadership and Re-enlistment Intentions. An analysis of the replies to the item "intentions to re-enlist" on the morale survey showed that the mean score on this reply was 3.08. Table VI shows that 46 percent of the members of democratic groups scored above the mean, whereas only 37 percent of the members of autocratic groups and 31 percent of the members of laissez-faire groups were above the mean.



TABLE VI

## RELATIONSHIP BETWEEN LEADERSHIP CLIMATE AND RE-ENLISTMENT INTENTIONS

Based upon the re-enlistment intentions of 161 men in 49 groups of Coast Guard enlisted personnel.			
	Leadership Climate		
	Democratic	Autocratic	Laissez-Faire
Number in Group	97	32	32
Number with above average re-enlistment intentions	44	12	10
Percent of total above average re-enlistment intentions.	27%	4.4%	6.2%
Percent of climate above average re-enlistment intentions.	46%	37.0%	31.0%

Replies to "intentions to re-enlist" showed a .86 correlation with replies to the item "opportunity to make decisions concerning your department". These relationships indicate that in a democratic climate where individuals are allowed to participate in group decisions and express their initiative, they are able to integrate their goals with those of the group. Being more able to achieve their own goals in a democratic climate, men were more likely to continue their careers in the service than those men who were members of autocratic or laissez-faire groups.

Correlations between "intentions to re-enlist" and importance of work to the individual to adequacy of pay were not significant. Although this may appear to contradict the above findings, it may be the result of the large portion of technically trained men in the groups observed who are induced to leave the service by much higher paying civilian job opportunities.



When the relationships between group productivity and the item "importance of work to yourself" were analyzed, they indicated that a democratic climate provided motivation towards superior performance. 75 percent of the groups which were ranked in the top one-third of productivity had members who considered their work more important to themselves than the average. In the middle one-third of the productivity ranking, only 66 percent of the groups considered their work of above average importance and in the lowest one-third only 61 percent. Here again the present study is supported by prior studies in that where work is important to the individual and self goals are satisfied within the group activities, productivity is higher than in other groups. The individual, by being able to identify and fulfill his goals or see the pathway to fulfill them within the group organization, increases group productivity as he strives to fulfill his own goals.

TABLE VII

RELATIONSHIP BETWEEN PRODUCTIVITY AND IMPORTANCE OF WORK

Based upon the replies of 112 men in 49 groups of Coast Guard enlisted personnel.				
Group Productivity	Importance of Work			Number of Individuals
	Poor	Average	Superior	
Groups ranked in upper one-third of productivity	4%	21%	75%	63
Groups ranked in middle one-third of productivity	17%	17%	66%	24
Groups ranked in lower one-third of productivity	24%	15%	61%	25

When morale was compared to productivity, an insignificant correlation of .004 was found. This is in line with prior studies as well as





the first phase of this study which have shown no strong direct relationship between morale and performance.

Summary. Throughout all the areas studied in this phase of the study, it was evident that there were strong interrelationships between leadership climate and leadership effectiveness as evidenced in group morale, individual job satisfaction and productivity. Generally the leader who had developed leadership techniques which created a democratic climate for the group to function within provided more effective motivation than the leaders who had created autocratic or laissez-faire climates. As a whole the laissez-faire climate has been the least effective in achieving self-satisfaction and motivation towards organizational goals. As in the first phase of the study, although no strong relationship between morale and productivity was shown, it was evident through their interrelationships with leadership climate that similar dynamic, democratic leadership attitudes created through the use of group decision techniques foster a high degree of self-satisfaction and motivation towards the Coast Guard's mission.

#### 4. Conclusions.

Similar interrelationships exist between the prevailing leadership climate and the morale and performance of the groups in both phases of the study. In groups where dynamic leadership through group decision methods had developed a democratic working environment, morale and performance were significantly higher than in other groups. Both phases of the study corroborate the findings of Lewin's group that a democratic leadership climate provides an environment in which the group can attain a higher level of morale and performance than an autocratic or laissez-faire climate (7).



The high morale of the democratic groups indicates that the individuals, through their participation in group decision making, were able to identify and integrate their goals with those of the group and establish the course to achieve both within the framework of the organization. As these individuals strove towards greater self-satisfaction they increased the level of performance of the group.

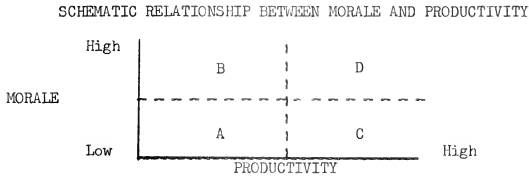
In autocratic groups, not only were morale and performance below the standards of the democratic groups, but a greater incidence of disciplinary cases was observed. Apparently in these groups the individual, being unable to gain self-satisfaction through the group objectives, attempted to achieve his own goals by activities which were in conflict with accepted group behavior. White and Lippett evidenced similar trends in controlled groups of children where they observed a large amount of "critical discontent and aggressive behavior" in autocratic groups (18).

Although both democratic and autocratic climates were more effective in accomplishing objectives than the laissez-faire climate, the findings showed that the democratic climate is definitely superior to the autocratic climate. As shown in the "Michigan Studies", "closeness of supervision" was a factor in determining the effectiveness of the group (4, 5, 6). Findings showed that in low producing groups the supervisor had limited the freedom of the individual group members by giving frequent and detailed instructions. By creating an autocratic climate in this manner, group effectiveness had been limited. Where dynamic leadership created a democratic climate, by a maximum delegation of authority and self determination, a higher level of performance was observed in the present study as well as prior studies (4).



Morale and Productivity. Attempts to analyze the relationship between morale and productivity did not produce any fruitful conclusion. Findings were in conformity with early studies of Likert who summarized the relationship schematically as in Figure 4 (24).

FIGURE 4



A small portion of the total number of groups could be placed in area A where both morale and productivity were low. Generally these groups functioned in a laissez-faire climate. The groups located in area B were characterized by high morale and low productivity. Although Likert found these groups to have leaders well versed in human relations training who tried to "keep people happy", the present study did not reveal any specific characteristics in this group. The groups falling into area C were characterized by poor morale but high performance. As in Likert's studies these groups had technically competent supervision, pushing for production, using autocratic leadership techniques. Falling into area D were those groups characterized by both high morale and performance. These groups generally functioned in a democratic climate where dynamic leadership provided high motivation towards group objectives and allowed a high degree of self-satisfaction.

The above indicates that the interrelationships between morale and performance are complex and affected by variables which have not been



identified in this study. The only relationship indicated is that both characteristics are a function of leadership climate in that desirable characteristics of morale and performance are associated with a democratic leadership climate.

An additional significant finding of the present study was the high correlation between re-enlistment intentions and closeness of supervision or opportunity to make decisions. The democratic climate, by making men feel that they belong and are important to the group, makes them want to stay in the service.

Areas for further study. This may be an area for fruitful further study to determine whether or not highly trained technical personnel can be motivated toward a service career by more complete development of a democratic working climate.

Additional study is required in the area of training to determine what procedures are required to train supervisors in dynamic leadership and group decision methods. How can supervisors be trained to fully understand the theories of the social scientists and apply them to actual military situations? Specifically, what attitudes to develop in training programs must be determined from further study and from practical application of group decision methods to operational units.

Limitations of Study. Further study is also required to confirm the applicability of democratic leadership climates and group decision methods to all military groups. This study involved only working groups at small, relatively independent Coast Guard units. Because, as shown in the Michigan Studies, motivation and self-satisfaction generally increase as size of the group decreases, the findings of this study must be regarded as suggestive and not necessarily applicable to





the naval services as a whole. The relationships observed may also be a function of the composition of the groups, their organization, degree of isolation, or mission. Until such time as their universal applicability is verified, the findings should be applied with caution and adapted to meet specific situations.

Applications. The findings show that, within the above limitations, naval leadership effectiveness may be improved through the understanding and application of democratic leadership techniques based upon group decision making methods and the theoretical studies of the social scientists. Each naval officer should become familiar with these techniques and encourage their use at all levels, or develop more effective leadership techniques which will provide greater motivation towards the Navy's or Coast Guard's mission.

The ultimate goal of further naval leadership studies should be to establish general laws about the factors influencing effective leadership so that naval leaders may be trained to provide climates in which the resources of Navy men can be directed towards accomplishing the service's mission while satisfying individual needs.



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# APPENDIX - FIGURE 5

Identification number \_\_\_\_\_

Group name (membership group) \_\_\_\_\_

Responsible Officer (the supervisor) \_\_\_\_\_

Designation \_\_\_\_\_

This questionnaire will be used as part of a psychology study correlating leadership characteristics with group and job performance being conducted at the U. S. Naval Post Graduate School.

## Group Evaluation of Supervisor

In evaluating the group of persons, compare them to other similar groups of persons in similar grades. Using the following scale circle the number that best expresses the performance of the group or individual:

100% good      good      fair      poor      very good  
2                      3                      4                      5

1. Effectiveness of group in accomplishing assigned tasks 1 2 3 4 5
2. General appearance of members of group 1 2 3 4 5
3. Cooperation between group members 1 2 3 4 5
4. Group work performance over time 1 2 3 4 5
5. Size of group 1 2 3 4 5
6. Performance of group
7. Cooperation with group 1 2 3 4 5
8. Adaptability to change 1 2 3 4 5
9. How well do members do their job 1 2 3 4 5
10. Individual group members work level 1 2 3 4 5
11. How well do they follow procedures 1 2 3 4 5
12. Pride in their work 1 2 3 4 5
13. General mental conditions 1 2 3 4 5
14. Ability to adjust to changing situations 1 2 3 4 5
15. How consider their work important? Yes \_\_\_ No \_\_\_
16. How many NCP cases have occurred in the group in the past 12 months? \_\_\_\_\_
17. How many Court Martial cases have occurred in the past 12 months? \_\_\_\_\_

the supervisor.

he is

from him.





# APPENDIX - FIGURE 6

Classification number \_\_\_\_\_  
 GPO : RELATIONSHIP STUDY  
 Supervisor Questionnaire

Date \_\_\_\_\_  
 Years of service \_\_\_\_\_  
 Months at present unit \_\_\_\_\_  
 Years in rate \_\_\_\_\_

This questionnaire will be used as part of a study being conducted at the United States Navy Post Graduate School to determine the relationship between factors contributing to job effectiveness. Your reply will be confidential. Fold and seal the completed questionnaire and return it to your Commanding Officer for forwarding to the U.S. Naval Post Graduate School.

## Group Performance Evaluation

Using the following scale circle the number which best expresses the performance of your subordinates as compared to similar groups.

very poor      poor      average      good      very good  
 1                      2                      3                      4                      5

- Effectiveness of group in accomplishing assigned tasks 1 2 3 4 5
- Personal appearance of members of group 1 2 3 4 5
- Cooperation between group members 1 2 3 4 5
- Group work performance under pressure 1 2 3 4 5
- Moral of group 1 2 3 4 5
- Performance of group 1 2 3 4 5
- Cooperation with other groups 1 2 3 4 5
- Adaptability to unusual situations 1 2 3 4 5
- How well do men work on their own 1 2 3 4 5
- Individual group members towards developing improved procedures 1 2 3 4 5
- How well do they strive for perfection 1 2 3 4 5
- Pride in their work 1 2 3 4 5
- General material condition 1 2 3 4 5
- Ability to adjust to changing situations 1 2 3 4 5

Do men consider their work important? 1 2 3 4 5

## Supervisor Relationship to the Group

In each classification circle the number which most closely fits your concepts of yourself.

Authority Delegation	1 Delegates a minimum of authority and establish a clear policy that you are in charge	2 Clearly delegate a maximum of authority and extract a corresponding responsibility from men	3 Delegates little authority, expects subordinates to assume responsibility and get job done with a minimum of supervision required
Work Assign- ments	1 Present general task to group, group then work division, provide guidance, and suggestions to the group	2 Issue general instructions to limit scope of task to allow subordinates to work on their own, provide assistance when asked for	3 Dictate specific tasks and methods to each man
Decision Making	1 Establish limits on problem with group, expect them to make proper decision concerning their work	2 Make firm decisions and announce them to subordinates	3 Present problems or tentative solution to group, decision reached is based on group suggestions
Participation in Group Activity	1 Participate actively in direction of the group being directed from group except when directing	2 Participate actively in group completion of group tasks as a member of group	3 Remain separated from group except when giving orders or requested information
Group Policy	1 Firmly establish all matters of group policy	2 Allow group to function without any policy	3 Group policy determined by group discussion with encouragement and assistance from you



Identification number \_\_\_\_\_

GROUP RELATIONSHIP STUDY  
Listed Questionnaire

Date \_\_\_\_\_ Station \_\_\_\_\_ Present unit \_\_\_\_\_

This questionnaire will be used as part of a study being conducted at the United States Navy Post Graduate School to determine the relationships between factors contributing to good job performance at various small military units. Your replies will be confidential. Fold and send the completed questionnaire and return it to your Commanding Officer for forwarding to the U. S. Naval Post Graduate School.

Circle the number which best expresses your opinion of the following in relationship to your present work group or unit.

Use the following scale:

<u>very poor</u>	<u>poor</u>	<u>average</u>	<u>good</u>	<u>very good</u>
1	2	3	4	5

1. Working conditions 1 2 3 4 5
2. Do you like your \_\_\_\_\_ 4
3. How important is your job to you 1 2 3 4 5
4. How important is your job to your supervisor 1 2 3 4 5
5. Does your job involve a great deal of responsibility 1 2 3 4 5
6. Is pay adequate for you 1 2 3 4 5
7. Living conditions 1 2 3 4 5
8. Opportunity for advancement 1 2 3 4 5
9. Interest of Senior Petty Officer or department head in your work 1 2 3 4 5
10. Help received from your Senior Petty Officer or department head 1 2 3 4 5
11. Cooperation of your supervisor by your Senior Petty Officer or department head 1 2 3 4 5
12. Cooperation with others you have worked for how would you consider your Senior Petty Officer or department head 1 2 3 4 5
13. Your intentions to re-enlist 1 2 3 4 5
14. Opportunities to discuss problems concerning your department with Senior Petty Officer or department head 1 2 3 4 5
15. How does your department compare with others at your unit 1 2 3 4 5
16. How does your unit compare with others similar in getting the job done 1 2 3 4 5
17. How does your unit compare with others where you have been assigned 1 2 3 4 5
18. When it comes to putting out work how does your department compare with others 1 2 3 4 5
19. Opportunity to make decisions concerning department 1 2 3 4 5
20. Do you desire to be stationed on another unit 1 2 3 4 5  
section/group-yes/no  
your district --Yes/no
21. Do you like your present unit in your section/group  
district
22. Would you prefer to be assigned to another department at your unit -- Yes/no  
If yes, which one?
23. What do you like best about your present job?
24. What do you like least about your present job?















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